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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,279	10/23/2001	Geoffrey L McCabe		8248

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EXAMINER

LOCKETT, KIMBERLY R

ART UNIT	PAPER NUMBER
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2837

MAIL DATE	DELIVERY MODE
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09/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/830,279

Applicant(s)

MCCABE, GEOFFREY L

Examiner

Kim R. Lockett

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 86-99, 104-107, 109-123 and 125-130 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 89-92, 112-123, 126 and 127 is/are allowed.
- 6) ☒ Claim(s) 86-88, 93-96, 104-107, 109-111, 125, 128 and 130 is/are rejected.
- 7) ☐ Claim(s) 97-99 and 129 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rearward surface (177) and the second end having an alternate string anchoring point formed therein below the surface of the body must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The second end having an alternate string anchoring point formed therein below the surface of the body is not found in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 93 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The second end having an alternate string anchoring point formed therein below the surface of the body is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 86-88, 94-96, 110, and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Desmond and Storey.

Desmond discloses the use of a tuning apparatus for a stringed musical instrument comprising a body and a neck extending outwardly from the body, a plurality of strings extending from the body to the neck, a first critical point for each of the strings on the neck, a second critical point for each of the strings on the body (see figure 1) comprising a bridge element; an anchoring point for one of the strings on the neck (see figure 1); and a bridge element further comprising; an anchoring point for another end of the strings; and an alternate string anchoring point for each string (see figure 2).

Desmond does not disclose the use of a fulcrum tremolo.

Storey discloses the use of a bridge with a fulcrum tremolo. Storey also discloses the use of a body, a fulcrum tremolo; a biasing element (24) comprising a first end connected to the fulcrum tremolo and a second end connected to the body (14); and at least one biasing element holder connected to the biasing element; and a singular apparatus connected to the fulcrum tremolo, the singular apparatus comprising a thumbwheel portion (44) operable to position the one biasing element holder, wherein rotation of the thumbwheel portion adjusts the equilibrium point between the tension of the strings and the tension of the biasing element to adjust the initial position.

Desmond and Storey do not disclose the specific shape of the spring as recited by the applicant.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the tremolo device as disclosed by Desmond and spring as disclosed by Storey to include a "U shaped spring" since it has been held that the shape of a device was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed device was significant, the claimed device was not patentably distinct from the prior art device. In re Dalley, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bridge as disclosed by Desmond with the fulcrum as disclosed by Storey in order to provide an adjustable element for each string.

7. Claims 104-107 and 109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gressett, Jr. et al and Storey.

As the applicant's invention is best understood Gressett, Jr. et al discloses the use of tremolo comprising an intonation module with a forward portion and a rearward portion: the module comprising a base (15) with a string hole, a bridge element (18) connected to the base, the bridge element located closer to the forward end forming a second critical point; and wherein the rearward portion forms a string anchoring point closer to the base than the second critical point; and wherein the string anchoring point is located a conventional distance from the second critical point and operable to render a string essentially inextensible between the anchoring point and the second critical point (see figure 3).

Gressett does not disclose the use of a fulcrum tremolo.

Storey discloses the use of a bridge with a fulcrum tremolo.

Gressett and Storey does not disclose the specific use of a .25 inch distance.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the distance as claimed by the applicant since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bridge as disclosed by Gressett with the fulcrum tremolo as disclosed by Storey in order to provide an adjustable fine tuning system.

8. Claims 128 and 130 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al in view of Storey.

Matsui discloses the use of a tremolo for a stringed musical instrument comprising a body and a neck, a plurality of strings extending from the body to the neck, a nut for supporting the strings on the neck forming a first critical point for each string wherein the fulcrum tremolo comprises a macro tuner: the macro tuner having a forward end closer the nut and a rearward end further the nut, the macro tuner comprising: a base; a bridge element connected to the base located closer the forward end forming a second critical point an elongated portion (31) slideably connected to the

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base; the elongated portion further comprising a string holder element, an adjustment screw connected to the base operable to position the elongated portion (see figure 2); the elongated member, the adjustment screw and the string holder located on the opposite side of the second critical point from the first critical point (see figure 1), wherein threading the adjustment screw is operable to position the string holder element to change tension of strings (column 2, lines 55-60)

Matsui does not disclose the use of a fulcrum tremolo.

Storey discloses the use of a bridge with a fulcrum tremolo. Storey also discloses the use of a body, a fulcrum tremolo; a biasing element (24) comprising a first end connected to the fulcrum tremolo and a second end connected to the body (14); and at least one biasing element holder connected to the biasing element; and a singular apparatus connected to the fulcrum tremolo, the singular apparatus comprising a thumbwheel portion (44) operable to position the one biasing element holder, wherein rotation of the thumbwheel portion adjusts the equilibrium point between the tension of the strings and the tension of the biasing element to adjust the initial position; and the use of a threaded elongated portion connected to the singular apparatus (see figure 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bridge as disclosed by Matsui with the fulcrum tremolo as disclosed by Storey in order to harmonically tune the guitar.

9. Claim 125 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minakuchi and Storey.

Minakuchi discloses the use of a tremolo(2) for a stringed musical instrument comprising: at least one bridge element; and a unitary component (6) that is a single piece of bent material comprising (column 3, lines 15-20) a base plate (36) being approximately planar, comprising: a pivot forming a pivot axis; at least one bend in the base plate; at least one additional portion formed to receive at least a portion of at least one bearing assembly, wherein the at least one bend and the at least one additional portion have an axis approximately parallel to the pivot axis, and wherein the unitary component is connected to the at least one bridge element. (see figure 1).

Minakuchi does not disclose the use of a fulcrum tremolo.

Storey discloses the use of a bridge with a fulcrum tremolo. Storey also discloses the use of a body, a fulcrum tremolo; a biasing element (24) comprising a first end connected to the fulcrum tremolo and a second end connected to the body (14); and at least one biasing element holder connected to the biasing element; and a singular apparatus connected to the fulcrum tremolo, the singular apparatus comprising a thumbwheel portion (44) operable to position the one biasing element holder, wherein rotation of the thumbwheel portion adjusts the equilibrium point between the tension of the strings and the tension of the biasing element to adjust the initial position; and the use of a threaded elongated portion connected to the singular apparatus (see figure 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bridge as disclosed by Minakuchi with the fulcrum tremolo as disclosed by Storey in order to lock a base at a specific position.

8. Claims 97-99, 129 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 89-92, 112-123, 126, and 127 are allowed.

10. Papers related to this application may be submitted to Group 2800 by facsimile transmission. Papers should be faxed to Group 2800 via the PTO 2800 Fax Center at 703-872-9306.

For assistance in **Patent procedure, fees or general Patent questions** calls should be directed to the **Patents Assistance Center (PAC)** whose telephone number is **800-786-9199**. Assistance is also available on the Internet at www.uspto.gov.

Any inquiry concerning **this communication or earlier communications from the examiner** should be directed to **Kim Lockett** whose telephone number is **(571) 272-2067**. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-1988


KIMBERLY LOCKETT
PRIMARY EXAMINER